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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,526	12/27/2004	Ashley Christopher Bryant	COLGRA P54AUS	2493
20210 7590 06/23/2008 DAVIS BUJOLD & Daniels, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301			EXAMINER SUNG, GERALD LUTHER	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 06/23/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,526	<b>Applicant(s)</b> BRYANT, ASHLEY CHRISTOPHER	
	<b>Examiner</b> GERALD L. SUNG	<b>Art Unit</b> 3746	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-17 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/3/2007 and 4/12/2005 and 12/27/2004</u> . | 6) <input type="checkbox"/> Other: _____  |



## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 11 is objected to because the claim appears to contain a typographical error. Claim 11, line 2, the limitation "plated" appears to be intended to mean "plate." Appropriate correction is required.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the diagonal of the air splitter plate found in claim 15, line 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claims 10, 16 and 17, the limitation “during operation” renders the claim indefinite because it is not clear whether the limitations which occur during operation are positively claimed in the invention. All depending claims of claims 10, 16, and 17 are further rendered indefinite.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 10-12 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Hubbard USPN 6,508,055 B2

8. Regarding claim 10, as best understood, Hubbard discloses a ducted air power plant comprising a motor driven fan 3 situated in a duct and having an intake where the fan is capable of producing a high pressure air stream in the duct, the fan being located

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adjacent to air splitter means 9, the air splitter means being arranged to divert an air stream into two or more subsidiary stream for delivery to respective air jet nozzles of the power plant.

9. Regarding claim 11, as best understood, the air splitter means 9 is a pair of doors that is capable of providing four subsidiary air streams. (When the doors 9 are in an intermediary position the air flow from the main fan 3 will be split into two flows, one towards the core fan 2 and one towards the thrust vectoring nozzles 7) The doors are found on both sides of the aircraft, each providing two subsidiary streams, which total four subsidiary streams.

10. Regarding claim 12, the air splitter means 9 is connected by the duct 8, herein interpreted as tubes, to the rear nozzle 14.

11. Regarding claim 14, the air splitter doors 9 are equipped with hinges 19 in which thrust splitters 10 are movably hinged on. The thrust splitters are herein interpreted as air control blades and are capable of being moved to adjust air flow to the individual air jet nozzles.

12. Regarding claim 15, as broadly claimed, the control blades 10 are mounted for rotation about an axis which is in line with a diagonal of the air splitter plate 9 such that a movement of a blade will offer a minimum obstruction to flow through an opening of the plate.

13. Regarding claims 16 and 17, Hubbard discloses in figures 1-4, a jet aircraft in which the engine is installed in. The jet aircraft, being a mobile platform through which

payload may be transported is herein interpreted to be equivalent to a mobile platform vehicle and an aircraft.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hubbard USPN 6,508,055 B2 in view of Johnson et al. USPN 4,222,233.

17. Regarding claim 13, Hubbard teaches a V/STOL engine for an aircraft with all elements except for a set of stator blades/vanes adjacent to the fan.

18. Johnson et al. teach a fan section where "the front section comprises two stages with two annular rows of rotor blades 28 and 30 interspaced between annular rows of variable inlet guide vanes 32 and variable stator vanes 34 and 36.

19. One of ordinary skill in the art at the time of the invention would have been motivated to include the variable inlet guide vanes and stator vanes taught by Johnson

et al. to the fans 2 and 3 of the engine disclosed by Hubbard in order to provide a more efficient fan section. It is well known in the art of turbine engines that guide and stator vanes are capable of adjusting the incoming flow to a rotor blade such that it yields the maximum efficiency for the blade, with respect to angle of attack.

***Conclusion***

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD L. SUNG whose telephone number is (571)270-3765. The examiner can normally be reached on M-F 9am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art  
Unit 3746



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Patent Examiner  
GS  
14 June 2008